

**Staged Implementation Approach for Chesapeake Bay TMDL
Aggregate WLA for
VA James River Basin Wastewater Treatment Plants** *Agreed to by EPA and
VADEQ 12/16/10*

Approach

Staged implementation approach for James River aggregate WLAs for significant WWTPs on the James River in Virginia:

- 2011-2017 – Interim effluent limits and controls implementing current and planned facility upgrades to achieve tributary strategy level TN and TP reductions plus reductions of an additional 1.6 million pounds of TN and 200,000 pounds of TP. Combined, these reductions are estimated to be 60% of the TN and TP reductions needed to achieve the aggregate TN and TP WLAs expressed in the December, 2010 Chesapeake Bay TMDL for the 39 significant WWTPs under the Watershed General Permit for significant WWTPs on the James River.
- Post 2017 - January 1, 2023 – Establishment of facility-specific TN and TP WLAs and effluent limits for each of the 39 significant WWTPs necessary to achieve the remaining TN and TP reductions needed to achieve the aggregate chlorophyll-a-based WLAs for TN and TP in the James River, with compliance required as soon as possible after 2017 and not later than January 1, 2023.
- 2012 Watershed General Permit (WGP) would include:
 - Individual James River facility-specific limits contained in the existing WGP plus effluent limits necessary to achieve additional reductions of 1.6 million pounds of TN and 200,000 lbs of TP with compliance required by January 1, 2017. Reductions under the WGP are consistent with Virginia WIP goal of achieving 60% of load reductions needed to meet the applicable Chlorophyll-*a* criterion.
 - Enforceable aggregate Chlorophyll-*a*-based effluent limits for TN and TP that apply to all 39 facilities to achieve the remaining 40% of the load reductions needed to meet the applicable aggregate WLAs for the 39 facilities and the applicable Chlorophyll-*a* criterion. Compliance with the aggregate TN and TP limits will be required in the permit as soon as possible after 2017, but not later than January 1, 2023.
- 2017 WGP will include:
 - Facility-specific effluent limits consistent with schedules contained in the VA WIP (excerpted below) to achieve an additional 1 million pounds TN and 250,000 pounds TP reductions with compliance required by January 1, 2022.
 - Enforceable aggregate Chlorophyll-*a*-based effluent limits for TN and TP that apply to all 39 facilities to achieve the remaining load reductions needed to meet the applicable aggregate WLAs for the 39 facilities and the applicable Chlorophyll-*a* criterion. Compliance with the aggregate TN and TP limits will be

required in the permit as soon as possible after 2017, but not later than January 1, 2023.

- 2018 Reissued WGP would include (following a comprehensive Phase III WIP evaluation of pollution reduction progress in all sectors):
 - As established in the 2017 WGP, facility-specific effluent limits consistent with schedules contained in the VA WIP (excerpted below) to achieve the additional 1 million pounds TN and 250,000 pounds TP reductions with compliance required by January 1, 2022.
 - To replace the aggregate Chlorophyll-*a*-based effluent limits for TN and TP established in the 2012 WGP and carried into the 2017 WGP, facility-specific effluent limits for TN and TP based on facility-specific WLAs to achieve the remaining load reductions needed to meet the applicable Chlorophyll-*a* criterion. Compliance with the facility-specific effluent limitations for TN and TP limits will be required in the permit as soon as possible, but not later than January 1, 2023.
 - A requirement for submission of compliance plans by each facility with effluent limits for TN and TP to achieve the remaining load reductions needed to meet the applicable Chlorophyll-*a* criterion or via the Nutrient Credit Exchange Association.

Schedule

EPA expects Virginia to reissue the WGP and fact sheet in 2012, 2017 and 2018 to include all elements of the above staged implementation approach, and the schedule of milestones listed below. In total, EPA considers the above implementation approach and the schedule of milestones below to be assumptions and requirements of the applicable wasteload allocations in the Chesapeake Bay TMDL:

- Jan. 2011 – Dec. 2016 – Continued implementation of construction and trading contracts approved in existing WGP compliance plans including sixteen upgrade projects at POTWs to meet Tributary Strategy WLAs, plus an additional 1.6 million pounds of TN reductions and 200,000 pounds of TP reductions. Projected to have first full operational year between 2011 and 2016.
- Dec. 2014 – Completion of engineering/cost optimization study to establish basis for which of the 39 facilities under the WGP, and in what order, will need to upgrade to meet the aggregate Chlorophyll-*a*-based limit applicable to all 39 facilities. In addition, progress in reductions from other sectors will be assessed and reflected in the basis for facility upgrades as compliance with the current Chlorophyll-*a* criterion through wastewater upgrades alone would require reductions below LOT treatment levels at all significant facilities in the James River Basin.
- Jan. 2017 – Reissue WGP with facility-specific water quality-based effluent limits consistent with schedules contained in the VA WIP James River Implementation Stage 1 [see excerpt below]. This includes an additional 1.0 million pounds of TN

reduction and 250,000 lbs of TP reduction by January 1, 2022. This WGP will also continue the enforceable aggregate Chlorophyll-*a*-based effluent limits for TN and TP that apply to all 39 facilities to achieve the remaining load reductions needed to meet the applicable Chlorophyll-*a* criterion, with compliance required in the permit as soon as possible after 2017, but not later than January 1, 2023.

- Dec. 2017 – Complete comprehensive assessment of progress for all sectors in meeting TMDL reductions; and, revise all sector allocations as needed for development of the Phase III Watershed Implementation Plan, through which EPA’s accountability framework calls upon the states to update their WIPs with 2018-2025 actions and controls.
- Jan. 2018 – Revoke and reissue the WGP to address any changes that result from the Phase III Watershed Implementation Plan, including establishing facility-specific effluent limits for TN and TP based on the facility WLAs necessary to achieve the applicable Chlorophyll-*a* water quality criterion, and facility-specific compliance schedules requiring compliance with the effluent limitations for TN and TP limits as soon as possible, but not later than January 1, 2023. [Other administrative permit procedures will be considered, such as administrative continuance of the 2017 WGP until 2018.]
- Submission of compliance plans by each facility with effluent limits for TN and TP or via the Nutrient Credit Exchange Association as described above.
- No Later Than January 1, 2023 - Compliance w/final Chlorophyll-*a*-based limits.

**Commonwealth of Virginia
Chesapeake Bay TMDL
Phase I Watershed Implementation Plan**

Excerpt from section 1.6 – James River Strategy

James River Implementation Stages:

Stage 1 - Virginia continues implementation of current nutrient regulations in the James River basin with an additional 2.60 mp/y Total Nitrogen (“TN”) and 0.45 mp/y Total Phosphorus (“TP”) reduction from significant wastewater discharges identified in the final computer model input deck submitted to EPA. The 2012 Watershed General Permit

will include those point source allocations in the current permit (no compliance schedule/limits effective January 1, 2011), plus allocations for identified discharges to accomplish the following: i.) an additional reduction of 1.6 mp/y of TN and 0.2 mp/y of TP in the lower tidal James River with a compliance schedule to end no later than January 1, 2017; and, ii.) a provision requiring an additional 1.0 mp/y TN reduction in the lower tidal James River and an additional 0.25 mp/y TP reduction throughout the James River basin with a compliance schedule ending no later than January 1, 2022. These reductions, combined with actions proposed in the other source sectors, will be sufficient to achieve the nutrient allocations for the James River basin needed to meet the dissolved oxygen water quality criteria. Virginia will also achieve by 2017 60% of the total N and P allocations established by EPA on July 1, 2010 with the expected reductions from point sources combined with actions proposed in the other source sectors.